



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,512	08/14/2003	Thomas O. Melrose	3123-509	3811
32093	7590	02/23/2005	EXAMINER	
HANSRA PATENT SERVICES 4525 GLEN MEADOWS PLACE BELLINGHAM, WA 98226			NEGRON, DANIEL L	
			ART UNIT	PAPER NUMBER
			2651	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/642,512

Applicant(s)

MELROSE ET AL.

Examiner

Daniell L. Negrón

Art Unit

2651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-37 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3 November 2003.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement (IDS) submitted on November 3, 2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, and 6-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Szita et al U.S. Patent No. 6,751,046.

Regarding claim 27, Szita et al disclose a hard disk drive having servo burst position correction comprising a base (not shown) a data disk (302) comprising a reference pattern (i.e. ruler) for providing position information to self-write final servo patterns in a plurality of data tracks arranged concentrically about a spindle (312), wherein each of said data tracks is segmented into a plurality of data sectors by servo sectors, wherein said disks may be rotated at a constant velocity with respect to said base (see Fig. 3 and disclosure thereof).

Szita et al further disclose a transducer (310) for reading information from said data disk and for writing information to said data disk, wherein said transducer is movable in a radial direction with respect to said disk to address a selected one of said plurality of data tracks

Art Unit: 2651

(column 4, lines 20-25), a voice coil motor (308), interconnected to said transducer, for moving said transducer with respect to said data tracks (column 4, lines 10-13), a channel for receiving signals, including position error signals, derived from said disk by the transducer, and a controller (304), interconnected to said voice coil motor, for controlling a position of said transducer with respect to said reference pattern, wherein the controller writes final servo bursts on the data disk by self-writing servo bursts along a circular track via a transducer, determining a position error due to repeatable runout at one or more points along the track addressed by the transducer, calculating a runout correction value from the position error, and storing the runout correction value for each of said points in a corresponding servo sector while self writing track locations (column 5, lines 30-33).

Regarding claims 28 and 31, Szita et al disclose a hard disk drive wherein the controller (304) further determines position errors due to repeatable runout at each of a plurality of points along the track, calculates runout correction values from the position errors, and stores the runout correction values for the plurality of points in corresponding servo sectors while servo writing (column 5, lines 30-39).

Regarding claim 29, Szita et al disclose a hard disk drive wherein the controller (304) further determines an instantaneous position error signal due to repeatable runout at each of the points along the track while self-writing the servo bursts, wherein the position error is a function of the instantaneous position error signal (column 5, lines 30-39).

Regarding claim 30, Szita et al disclose a hard disk drive wherein the controller (1302) further records the instantaneous position error signal while self-writing the servo bursts and uses the recorded instantaneous position error signal to calculate the runout correction value (column

Art Unit: 2651

8, lines 5-11). Furthermore it is considered that the position error signal is recorded in order for the controller (1302) to process this signal to execute the necessary calculations to obtain the runout correction value (also see Fig. 13).

Regarding claim 32, Szita et al disclose a hard disk drive wherein the controller (304) stores the runout correction values for each of the plurality of points in a corresponding servo sector after self-writing servo bursts along the track (column 2, line 65 through column 3, line 13 and column 5, lines 49-57).

Regarding claims 33-37, claims 33-37 have limitations similar to those treated in the above rejections of claims 27-32, and are met by the references as discussed above.

Regarding claims 14-26, method claims 14-26 are drawn to the method of using the corresponding apparatus claimed in claims 27-37. Therefore method claims 14-16, and 18-26 correspond to apparatus claims 27- 37 and are rejected for the same reasons of anticipation as used above.

Regarding claims 1, 2, and 6-13, method claims 1, 2, and 6-13 are drawn to the method of using the corresponding apparatus claimed in claims 27-37. Therefore method claims 1, 2, and 6-13 correspond to apparatus claims 27-37 and are rejected for the same reasons of anticipation as used above.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2651

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Szita et al U.S.

Patent No. 6,751,046 in view of Ehrlich et al U.S. Patent No. 6,519,107.

Regarding claim 3, Szita et al disclose a method for self-writing track locations with all the limitations of claim 1 as discussed above but fail to show each servo pattern including a trimmed burst pattern.

Ehrlich et al however, disclose a method for servowriting wherein trimmed servo bursts are used for the purpose of providing head control while reducing repeatable runout in a disk drive (column 11, 1-25).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method for self-writing disclosed by Szita et al with the teachings of trimmed servo bursts shown by Ehrlich et al in order to obtain a method of self-writing wherein repeatable runout is reduced during head positioning.

#### ***Allowable Subject Matter***

6. Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


#### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 703-305-6985. The examiner can normally be reached on Monday-Friday (8:30-6:00) alternate Fridays off.

Art Unit: 2651

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on 703-308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DLN   
February 11, 2005

  
**DAVID HUDSPETH**  
**SUPERVISORY PATL.**  
**TECHNOLOGY CENTER 2600**